

THE TRANSFORMATION OF MODERN ARCHITECTURE IN KAZAKHSTAN: FROM SOVIET “INTERNATIONALISM” TO A POST-SOVIET UNDESTANDING OF THE REGIONAL IDENTITY

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After the collapse of the USSR at the end of the 20th century, the Soviet republics, including Kazakhstan, that had been previously united within one country became independent countries and went through decades of reforms to establish new social, political and economic frameworks and revive their own cultural traditions. The transition from the state-planned Soviet-era economy to the market economy was accompanied by dramatic changes in all aspects of life – in the economy, science and culture. The Soviet architecture in Kazakhstan met the contemporary requirements of its time: all settlements were developed according to approved master plans, and design and construction were carried out by large state companies with powerful technical potential. 30 years of post-Soviet life have gone by since 1991, and Kazakhstan has gone through some transformation in its architecture; it is now searching for methods of expressing a unique "Kazakh" architectural language with its own particular regional characteristics seen in: arches, domes, ornamental motifs of decorative design.

The purpose of the study is to analyse the transformation that the architecture in Kazakhstan has undergone so far in the 21st century using the example of public buildings, and to identify the factors forming new features of architecture. Realizing the dependencies of Kazakhstan's architectural transformation on the new social and economic conditions will help architects strengthen the regional identity in the architecture through the symbiosis of traditional local experience and new global technologies.

Key words: transformation, avant-garde architecture, Kazakhstan, regional identity.

INTRODUCTION

Large-scale cataclysms, such as a change in the social and political structure, or transition from the state-planned economy to market relations, undoubtedly entail changes in all aspects, both tangible and intangible, of public life. The development of architecture in such periods gains a special momentum, and it is transformed according to the new needs of the state.

Soviet paternalism expressed in the governmental regulation of architecture covering one sixth of the globe was replaced by the quest for regional originality in the independent post-Soviet states. Since 1991, the search for new techniques and ways to improve the modern architecture in Kazakhstan has become a trend, especially significant for the young state making its own unique image on the international scene. Changes have taken place mainly in expressing architectural imagery using a wide palette of tools ranging from elements of traditional architecture to global “replicas”.

Regional originality has been successfully formed through the organic combination of traditions and global trends within the local contexts. The study and analysis of local

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natural, historical, cultural and economic specificity contribute to "...understanding the traditions of the regional cultures and methodological use of their qualities that are not visible to a superficial analysis..." (Asskarov, 1986, p. 39).

To see the changes that have taken place in the architecture of Kazakhstan, it is useful to compare Soviet and post-Soviet public buildings (museums, theatres, youth palaces, etc.), which represent the key elements of the spatial environment. These buildings express the active response to the cultural needs of society and most clearly reflect the local context. The architectural image of these buildings derives from the ethnic, historical and construction traditions, as well as modern technological innovations, linking society with its cultural memory. As a result, this brings a sense of ownership and belonging to history, which helps better self-identification.

In the post-Soviet period, the residential architecture has also changed: the planning concepts have become diverse, regulatory standards for living space less stringent, and facade solutions now use modern cladding materials. Comparison between the Soviet and post-Soviet architecture reveals a gradual change in the creative paradigm, from the romanticism of the 1970s through the monumentalism of the 1980s to the avant-garde of the 2000s.

In general, the architectural preferences have obviously changed in Kazakhstani cities: the development trajectory of modern architecture in Kazakhstan stems from the Soviet experience (Soviet neoclassicism and international architecture), with its form-making moving towards avant-gardism supported by regional originality.

The authors of this article set out to analyse transformations in the modern architecture of Kazakhstan. The paper shows that a specific feature of the projects implemented by domestic and foreign architects in Kazakhstan since 1997 is the intention to express the regional identity. Such projects have been carried out primarily in two cities – Nur-Sultan (formerly Astana), the capital, and Almaty, the largest city in Kazakhstan.

Following 1991, when Kazakhstan gained independence, the search for regional identity in the architecture became an issue of special interest. Architecture and construction were boosted when the capital moved (in 1997) from Almaty to Astana (renamed into Nur-Sultan in 2019). The world witnessed the capital of Kazakhstan swiftly turning from a provincial Soviet city into a modern avant-garde "scene" of architectural premieres. That transformation of Soviet-style architecture into an avant-garde style extended to other cities as well.

The capital was built up at a rapid pace. A large number of original projects were implemented under Kazakhstani architects: the House of Ministries, development of the Main Square and Round Square, Vodno-Zeleny Boulevard, multi-storey residential complexes, museums, office buildings, hotels and shopping malls, universities, medical centres, and many others. Among them are residential complexes Astana Triumph (architects: A. Zuyev, N. Borisskin), Northern Lights (architects: A. Saumenov, Ya. Ezau, Sh. Mataibekov),

and Grand Alatau (architect: Sh. Mataibekov), Temir Zholy Administrative Tower (architect: T. Abilda), and others (Abdrassilova *et al.*, 2018, Chikanayev, 2008).

The opening of its borders and strengthening of international relations opened up new opportunities in architecture and construction. International competitions were held to attract well-known foreign architects along with Kazakhstani specialists to design the capital city's buildings, and as a result, projects combining local traditions and global trends in architecture were implemented. Projects by foreign architects expressed then-current ideas adapted to the then-current realities of Kazakhstan, accelerating progressive technological and artistic trends. On the one hand, cooperation with world-class architects yielded dividends such as the introduction of new construction technologies into local practice. On the other hand, a style created by "foreign" culture professionals in the architecture of Kazakhstan generally combining universal solutions with the creative interpretation of regional features in real practice is an interesting challenge that requires analysis and thorough understanding.

Building a new city on a new territory on the left bank of the Yessil River (while the old Soviet part of the city remained on the right bank) gave architects a historical *carte blanche* for implementing their own creative ideas. The search for regional originality in the architecture of this developing country has intensified. This process continues to be complicated and ambiguous: there are both undoubted achievements and obvious disappointments.

In the 21st century, this country has been actively building residential, public and industrial buildings and structures. The architectural and construction industry of Kazakhstan both solves pragmatic tasks (shaping the living environment for the people), and intends to improve the country's image on the international scene, as well as attract foreign investors and tourists. In this process, great importance is attached to the originality of the architectural environment of cities, and individual buildings within them.

Comparing the Soviet and post-Soviet architecture in Kazakhstan has made it clear that certain changes have occurred in several areas:

- economic changes: sources of funding for the design and construction industry are different now. The state-planned Soviet economy assumed that only state funds should be used to design and build facilities, and that each project should be approved by the state. The post-Soviet economy encourages the interest of private investors and offers creative freedom to the authors of different projects. The vast Soviet system of state-owned design institutes has been replaced with private design companies. All major projects are carried out on the basis of international competitions, which ensures a high standard of architecture;
- technological changes: Soviet architecture was mainly based on industrial construction methods with the use of prefabricated reinforced concrete structures. The new market economy has welcomed foreign investors, new technologies, and modern construction materials to Kazakhstan;

- typological changes: during the Soviet era, there was a certain range of facilities, which were mainly built according to standardized designs, such as governmental agencies, public schools, hospitals, etc. During the post-Soviet period, unique construction projects have become prevalent.

The typological changes are associated with changes in the structure of supply and demand for various services, for example, contemporary shopping malls combine many functions for which separate buildings were erected during the Soviet era such as shops, restaurants, gyms, children's play parks, recreational facilities, and consumer services (dry cleaning, photo salons, shoe and clothing repair, etc.). Individual movie theatres are no longer constructed, since now they are part of large shopping malls.

Big changes have also occurred in residential architecture: typical Soviet-era buildings differ a lot from today's residential complexes, which are built as individual projects, both in terms of their comfort and variety of facades;

- artistic changes: the restrained shapes of Soviet architecture dictated by governmental policy have now been replaced with a variety of shapes and forms, and many unique buildings have avant-garde features. This change in the creative paradigm is quite natural: the best examples of Kazakhstan's architecture of the 1970s expressed the ideals of romanticism, while the political stagnation of the 1980s led to monumental forms in the architecture, and then the post-Soviet history in the 2000s gave rise to avant-garde ideas.

The first two decades of this century in Kazakhstan were marked by "reformatting" the architectural language: this means that the consolidation of local and foreign experience was reflected in the shape of buildings and structures with new artistic image solutions. A key factor in the artistic transformation of the architecture in modern Kazakhstan is the search for a regional identity through use of avant-garde shapes.

MATERIALS AND METHODS

The comparative analysis method was used for the study. The authors compared large public buildings built in the Soviet era with post-Soviet buildings of a similar functional purpose. Comparing the two periods has revealed specific differences in their architectural form and their building language.

The architecture of Kazakhstan in the 20th century developed in line with the Soviet mainstream standards: all large buildings in Kazakhstan were built after they had been approved by the central ministries located in Moscow, in accordance with national standards and based on a standardized approach to architectural and planning, structural and technical solutions. However, the best examples of cultural, entertainment and sports buildings of the 20th century demonstrated the unique plasticity of their facades, and bold engineering solutions in the spirit of those times. The architectural and construction industry of Kazakhstan was a part of the huge Soviet system. From 1956, the Alma-Ata House-Building Plant, one of the largest plants in the USSR producing reinforced concrete structures,

operated in the capital city of Kazakhstan, until it closed in the '90s.

Large buildings were actively constructed in Kazakhstan from the 1960s to the 1980s, including cultural facilities and consumer services, as well as entertainment, sports, educational and industrial buildings and facilities. The development of the architecture of public buildings reflected the socio-economic and political conditions (economic power of the state, centralized control of design and construction operations). All aspects of life including architecture were politicized, which affected the appearance of the buildings – their form was traditionally solemn and based on standardized techniques and elements of construction. Only a few unique buildings were decorated with national motifs. Truly independent and original projects were also allowed, but rarely (for example, Chokan Valikhanov Museum, whose authors were architects: B. Ibrayev, S. Russtambekov, A. Seydalin, 1985) (Figure 1).



Figure 1. Chokan Valikhanov Museum, architects B. Ibrayev, R. Seydalin, S. Rustembekov, 1985

(Source: Galimzhanova and Glaudinova, 2011, p.127, 131)

In general, unlike in the Soviet era, the architecture of independent Kazakhstan is mainly funded not by the government but by private local and foreign investors. New buildings actively use foreign technological innovations, and often have avant-garde features with elements of regionalism.

The comparative analysis involved not only projects by Kazakhstan's architects but also those by foreign architects. The international design competitions held for large facilities (EXPO-2017 Complex (Figure 2), Palace of Peace and Reconciliation, Khan-Shatyr Shopping Mall, Kazakhstan Movie Theatre and Concert Hall, as well as hotels and residential complexes) attracted new participants. Projects by foreign architects spurred creative ideas and stretched the capabilities of local architects. The diversity of national cultures, along with architectural traditions, has been a source of new trends in form making, and the enrichment and revitalization of local experience and social fabric through actualized interpretation has given rise to avant-garde architecture (Ikonnikov, 2001).

New construction technologies introduced into local practice and representatives of "foreign" culture involved in creating the architecture of Kazakhstan have contributed to the fusion between universal global techniques and local features creatively interpreted in the regional architecture. For example, in over 24 years of constructing the capital city,

the territory of Nur-Sultan has become a kind of a laboratory of unique buildings created by architects with international design experience: Kisho Kurokawa, Norman Foster, Manfredi Nicoletti, Adrian Smith + Gordon Gill Architecture, and others.

In this study, a typological affiliation (museums, culture and sports facilities) is used as the basis for comparing Soviet and post-Soviet buildings, as it is in public buildings that we can most evidently witness the architectural trends of different historical periods.

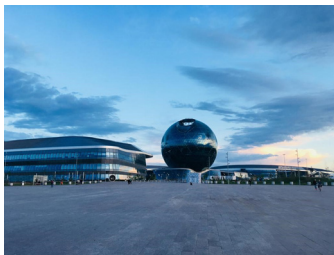


Figure 2. International specialized exhibition EXPO-2017: Future Energy (in which the sphere is home to Nur-Alem technological museum of the energy of the future), architects Adrian Smith + Gordon Gill, 2017 (Source: E. Danibekova)

Museums

Museums are special types of cultural and educational facilities that promote the education and involvement of the general public in culture and arts. The purpose of museums is to expose, store and study tangible and intangible cultural artefacts, and to give access to and inform the general public of the achievements of culture and science (Noiphert, 2011). It is natural that a museum building, with its peculiar unique architecture, is an object of culture and art itself, as well as a striking element integrating the urban environment (Tzortzi, 2015).

The risk of the widespread dissemination of anonymous architecture in the era of globalization encourages architects and town planners to carefully study and use the features of a given area in regional design. The architecture of museums is a guide to history, a link between past and present generations. As evidenced by the experience of developed countries, various modern museums are buildings with pictorial and inspiring architecture.

In Kazakhstan, museum buildings reflect the main architectural trends of the respective historical periods. Following the 1970s, when Soviet classical traditions were abandoned in architecture, extraordinary solutions were used for some museum building projects.

Special methods of interpreting some forms of distinct architecture based on functionality and climatic adaptation were used during the construction of A. Kasteyev State Museum of Arts (architects: E. Kuznetsova, O. Naumova, B. Novikov, 1975) (Figure 3). The core of the building, providing access to all functional areas, is the atrium, and this is the basis of the entire volumetric-spatial composition of the building (Ayagan *et al.*, 2006, p. 289-290). For Almaty, with its southern climate, an impressively large atrium

and a patio with landscape elements are alternatives for creating a comfortable microclimate in the summertime. The architectural volume of the building is concise: the rectangular geometry of the front facade surfaces ends with a four-sided glass pyramid above the atrium. The conciseness of the facades is created with triangular protrusions along the entire perimeter of the building, and a portico which markedly protrudes above the main entrance. In terms of town planning, the museum building was designed as the cultural center, amidst a new developing middle rise residential district of the city. But even today, when multi-storey buildings spring up in this area, the museum building has not yet lost its significance as a key element of the landscape and an example of progressive trends in the architecture of Almaty from the 1970s.

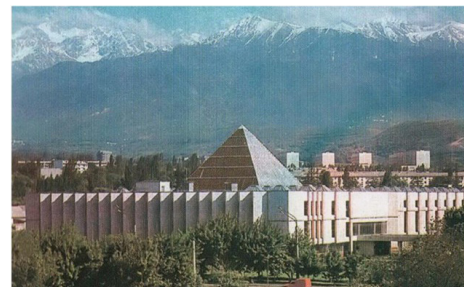


Figure 3. A. Kasteyev State Museum of Arts (Almaty, 1975, architects E. Kuznetsova, O. Naumova, B. Novikov) (Source: Ayagan *et al.*, 2006)

Another building, the national museum, built in Almaty in 1985 – almost in the last years of the Soviet era – is a monumental domed structure with an accented axis of symmetry. The image of the Central State Museum of the Republic of Kazakhstan (architects: Yu. Ratushny, Z. Mustafina, P. Rzgaliyev) was created using techniques inspired by local memorials and places of worship, and applied decorative art. Despite the large dimensions of its palace style architecture, with a number of massive vertical divisions, the building is perceived to be of a harmoniously selected scale, and the proportions of its shapes make the building light and original. The Central State Museum is a pronounced example of cultural trends in the architecture of Kazakhstan in the 1980s.

The architecture of a small museum named after Chokan Valikhanov is a kind of chamber art (architects: B. Ibrayev, R. Seydalin, S. Russtembekov, 1985). The project reflects the creative style of architect B. Ibrayev, who has always incorporated Kazakh cultural symbols in his projects (Galimzhanova and Gludinova, 2011). The architecture of Abai and Shakarim museum (architect: B. Ibrayev, 1995) (Figure 4) is a reference to Kazakh memorials, while the image of the Korkyt-Ata museum (architect: B. Ibrayev, acoustic physicist: S. Issatayev, 1980) (Figure 5) refers to the myth of the great thinker of Turkic peoples who invented *kobyz*, a national stringed instrument (Ayazbekova, 2011, p.111). The architecture of the ALZHIR memorial museum of victims of political repressions, which is dedicated to female political prisoners, stands out for its originality. The author of the project is architect S. Narynov (2007) (Kodar, 2010) (Figure 6).

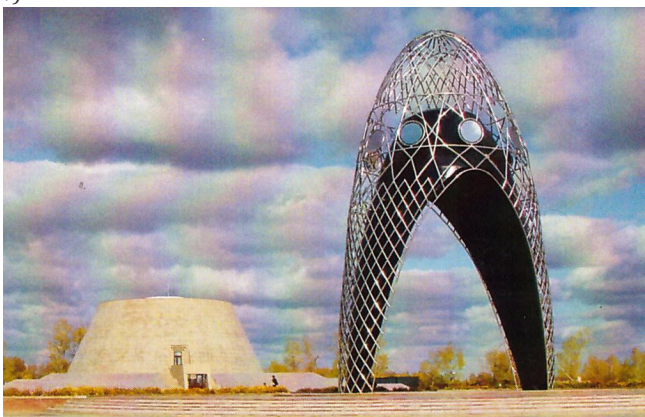


Figure 4. Abai and Shakarim museum, B.Ibrayev, S.Agitayev, L.Karpykov 1995 (from the personal archive of B.Ibrayev)



Figure 5. Korkyt-Ata museum, B.Ibrayev, S.Issatayev, 1980 (from the personal archive of B.Ibrayev)

a)



b)

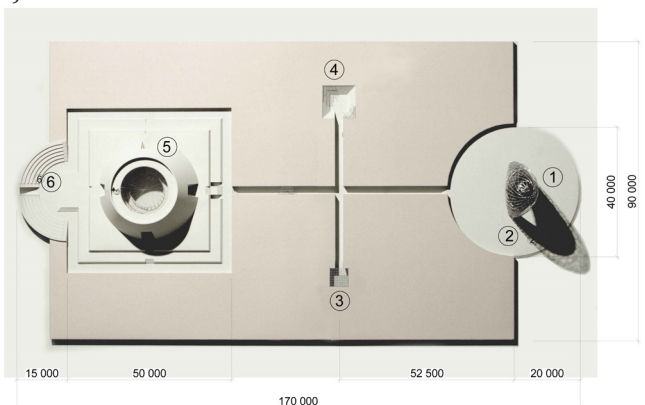


Figure 6. ALZHIR memorial museum of victims of political repressions. S. Narynov, 2007: a) general view (Kodar, 2010); b) model of plan: 1 – “Arch of sorrow”; 2 – Square; 3 – Composition “Despair and powerlessness”; 4 – Composition “Struggle and hope”; 5 – Museum for victims of repressions; 6 – Amphitheatre (photo kindly provided by architect S. Narynov)

The architecture of the National Museum of the Republic of Kazakhstan, which was opened in 2014 in the capital city of Kazakhstan, uses avant-garde shape techniques (Meuser, 2014, p. 115). The museum building is an unusual shape and consists of seven blocks with various numbers of storeys. It is the largest museum building in Central Asia, with a total area of 74,000 m². The monotony of the dead walls of some blocks is enlivened with bas-relief of ethnic ornament. The architectural planning solution for the museum was a clear functional division of exhibition zones for the convenient phased movement of visitors, to allow them to follow the historical chronology. In the museum, you can study materials on the archaeology, ethnography, historical monuments, original steppe culture and spiritual heritage of Kazakhstan, starting from the ancient times. Particular attention is paid to modern exhibition technologies, as well as additional inclusions (the research institute, conference halls, and media halls) that meet international standards and contribute to the interactive study of the country's latest history and cultural heritage.

In terms of town planning, the museum is located on the main square, in a compositional relationship with the new center of the capital city which is an architectural ensemble of modern buildings of national importance and cultural value. Nur-Sultan, the second coldest capital city in the world, has strong winds and temperatures can drop to -52°C in winter. These harsh conditions in the north of Kazakhstan require development of appropriate construction methods. One common technique is to protect the architectural environment from snow drifts and prevailing winds by means of dead-walled buildings. When the museum building was erected, the features of the local sharply continental climate were taken into account: the northern facade is an almost solid dead wall protecting the building from prevailing cold winds in winter; while large stained-glass windows face east and southeast, since they are open to sunlight and warmth. The museum appears to the visitors as a dynamic shape symbolizing the strength and power of the state.

Palaces

Along with the architecture of museums, of interest is also the approach to the architecture of other cultural, scientific and art facilities. During the Soviet era, Kazakhstan's most significant architectural structures were built mainly in Alma-Ata (now Almaty), its former capital city. In the early 1970s to mid-1980s, Kazakhstan's architecture enjoyed the flourishing period of so-called Soviet Modernism (Bronovitchkaya *et al.*, 1991).

An important milestone in the architecture of Soviet Kazakhstan was the erection of the Palace of the Republic (the Palace of V.I. Lenin in 1970, awarded the USSR State Prize in 1971) (Auezov and Chulakova, 2010), the House of Friendship (1972) (Ayagan *et al.*, 2006, p. 249), and Sats Young spectator's theatre (AHBK Palace of Culture, 1981) (Ayagan *et al.*, 2006, p. 307), since these buildings expressed the national originality and special artistic flavour conditioned by ideological requirements. All these buildings with their design solutions stand out for their monumentality. Their imagery is based on the active tectonic

plasticity of the structural elements on the facades, with the contrast of horizontal and vertical protrusions (pylons) contributing to the “play” between shaded and illuminated areas. Together with the visual and spatial elements that emotionally affect the viewer, the crown-shaped porticos above the main entrance make the buildings look highly expressive. The porticos designed for the Palace of Republic and House of Friendship have a scaly surface, creating the effect of a hovering roof (Ayagan *et al.*, 2006, p.249).

Regional features are most notable in the architecture of the Republican Palace of Schoolchildren (architects: V.N. Kim, A.P. Zuyev, T.S. Abildayev, 1983) (Auezov and Chulakova, 2010). Owing to its expressive architecture and striking design, the building harmoniously fits in the existing town planning context. The dome, typical for traditional Kazakh architecture, covers the observatory, and the use of a dynamic spiral in the planning scheme of the building was dictated by the cosmogonic ideas of the nomads on the structure of the world.

In the post-Soviet period, the focus of active architectural searching shifted from the former capital city of Kazakhstan, Almaty, to the new capital city, Astana (currently, Nur-Sultan). The new unique buildings of Nur-Sultan such as the Palace of Peace and Reconciliation (architect N. Foster) (Figure 7) (Meuser, 2014, p.172), Palace of Schoolchildren (architect N. Yaveyn) (Figure 8) (Meuser, 2014, p.182), Khan Shatyr Shopping Mall (architect N. Foster) (Meuser, 2015) and others were designed by foreign architects. These unique buildings and structures can be classified as examples of avant-garde architecture that give a unique look to the young capital of Kazakhstan (Chikanayev, 2008). The Palace of Peace and Reconciliation, designed by architect Norman Foster, was erected in 2006 in connection with the International Congress of World and Traditional Religions. The pyramidal look of the building reflects the regional view of the world: it has a square base (61.8 by 61.8 meters) which symbolizes the earth, while the top of the pyramid means the sky, eternity. The building is interpreted as the center of the universe where various religions unite to form a community. Nur-Sultan’s cold climate was also taken into account by the architect: British engineers used unique movable hinged structures at the base of the pyramid that can respond to seasonal temperature fluctuations by contracting and expanding with an amplitude of 6 cm.

The Palace of Schoolchildren, designed by Russian architect N. Yaveyn, looks like a giant cylinder (with a diameter of 156 m) with a central atrium, which is associated with the traditional shape of a *yurt* - a demountable dwelling of the nomadic Kazakhs (Figure 8) (Meuser, 2014, p.182).

In the nomadic life, the streamlined shape and lightweight structure of a *yurt* were dictated by the living and climatic conditions that required resistance to strong steppe winds. The *shanyrak*, a crowning wooden round element used as light and smoke extraction, and the *uyks* (dome planks) were the main components of a dwelling. The composition of the *shanyrak* and the *uyks* was also of a sacral significance symbolizing the Sun, with rays directed into the eternal sky (Meuser, 2014, p.182).

A modern interpretation of the *uyks* in the form of an outer mesh metal structure is present in the architecture of the

Palace of Schoolchildren. The appearance of the building is dictated by its internal content: protruding rectangular blocks accentuate the clear delineation of the functional areas. In general, the palace is an avant-garde reading of traditional shapes combined with concise geometric volumes moving in a space and based on the ideas of constructivism and suprematism.

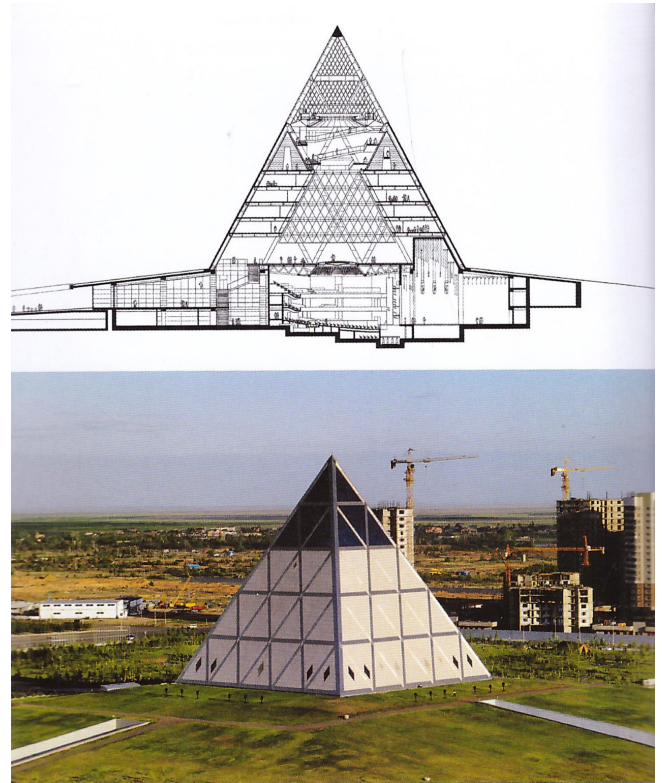


Figure 7. Palace of Peace and Reconciliation (Nur-Sultan, 2006, architect N. Foster). Section and general view (Meuser, 2014, p.172)



Figure 8. Palace of Schoolchildren (Nur-Sultan, 2010, architect N. Yaveyn) (Source: E. Danibekova).

The constructivism of the building is expressed through the functional conditionality of the form-making tectonics, and suprematism is expressed through the visual emotional perception of the composition, built on a contrast of vertical volumes and active “outflows” of horizontal forms. Suprematism in architecture implies avoiding traditional

décor, or its replacement with plane partitioning, or bas-relief not related to the context of the area. "Plane painting" using a geometric ethnic ornament on the facades of the building creates the allusions that give rise to new sensations.

The form-making concepts of the Palace of Schoolchildren in Nur-Sultan can rightfully be connected to new transformations in the avant-garde architecture of Kazakhstan.

Other facilities in Nur-Sultan expressing the new architecture of Kazakhstan include the Palace of Independence and the Shabyt Palace of Creativity, which are located on both sides of the main compositional axis of the capital city passing through Akorda (residence of the President of the Republic of Kazakhstan) and the Palace of Peace and Reconciliation (Meuser, 2015).

The Palace of Independence (Linea Tusavul Architecture, 2009) is a complex of art galleries, museums, movie theaters, a digital library designed for holding various events, exhibitions, concerts, etc. (Meuser, 2014, p. 166).

The Shabyt Palace of Arts (Sh. Mataibekov, 2009) is a unique multifunctional cultural building that is a creative space for all types of arts (Meuser, 2014, p. 164). It is a house of the University of Arts of Kazakhstan, with lecture halls, art, dance and music studios, film pavilions, concert halls, a gym, a library, multifunctional conference halls, a restaurant, etc. The simple form of the Palace of Arts (conical glass-and-metal cylinder with a cut-out core - courtyard) was based on the concept of art, which is kept by the people as a valuable vessel to be passed on to future generations.

The authors of the building solved a difficult problem: many different functions were enclosed in a round shape. As a result, this unique building is concise with regard to its shape but complicated in terms of its content, with its geometry harmonious to the opposing building on the other side of the compositional axis. This geometry-centered approach to form-making places it in line with a series of the brightest samples of avant-garde architecture in Kazakhstan.

Ice-Rinks

Almaty is the former capital of Kazakhstan, the largest metropolis in the country, located at the foot of the Zailiyskiy Alatau Mountains (Northwest Tien Shan). The city is the financial, scientific and cultural center of the country; it successfully combines traditions and innovation, and harmoniously fuses Asian and European influences. The essential factors in the formation of Almaty's unique architectural images include natural and climatic conditions, raised relief, and a picturesque panorama of the mountainous skyline. These spatial conditions form a favourable environment for the development of sports infrastructure, both in the mountainous and in the urban environment. For the sports complexes to function correctly they must meet strict requirements for adequate engineering communications, distribution of zones and various flows of people. The large areas and dimensions for the main sports grounds stands for many spectators are a fundamental module in designing such entertainment facilities. Designers address the issues of creating comfortable conditions for watching sports games, including the layout of seats for spectators within a large but unsupported space.

Advanced Soviet technologies were used to construct the Baluan Sholak Sports Palace in Almaty (architects: V. Katsev, O. Naumova, designers M. Kasharsky, Z. Volkov, S. Matveyev, M. Plakhotnikov, 1966). This is a two-level rectangular large-span building with metal frame structures covered with roof trusses to a semicircular pattern (Ayagan *et al.*, 2006, p. 245).

In 2017, Halyk Arena Ice Palace and Almaty Arena Ice Palace, the multifunctional ice complexes, were built to host the Winter Universiade in Almaty (architect: S. L. Meleshenko) When erecting the buildings, the following city-forming factors were taken into account from the very beginning: the buildings are located at the intersection of the large highways, which ensures a good view, and emphasizes the unusual smooth shapes of the buildings against the background of the mountains. In these new generation sports facilities, internal functional content corresponds to the external appearance expressed through the shapes of natural elements such as blocks of ice, snow, and huge frozen drops of water sparkling under the rays of the mountain sun. The new sports facilities in Almaty have harmoniously blended into the modern avant-garde architecture of Kazakhstan due to their new constructive solutions and non-standard artistic looks.

RESULTS AND DISCUSSION

The transformation of architecture has occurred as a response to social, economic, cultural and historical changes. A comparison between the Soviet and post-Soviet architecture of Kazakhstan shows obvious changes which have been caused by economic and technological innovations, and led to typological and artistic transformations:

- economic changes took place as a result of a change in the socio-economic structure of the state;
- technological innovations became possible due to the inclusion of Kazakhstan in international processes, and the construction of a new capital city;
- typological changes result from a change in the structure of supply and demand for various services, and an increase in the material and financial capabilities of the population; and
- artistic transformations are associated with the self-identification of people in the independent state, and the creative search for the means of expressing regional peculiarities in architecture. Almost all large modern buildings use unique ways to express their regional identity through certain marking features (graphic, plastic or volumetric decorative elements, shapes of buildings) as allusions to local building styles (domes, arches, lattices) (Abdrassilova *et al.*, 2021; Meuser, 2014).

The authors compared large public buildings from the Soviet era which adequately shaped the architectural appearance of the cities of Kazakhstan, and post-Soviet era buildings with a similar function. The comparison revealed the specific form-making features of the architecture of the two periods. Politicization of all aspects of life, including architecture, in the Soviet era influenced the appearance of the buildings, which were traditionally solemn, and used standardized techniques and elements of construction. Only some unique objects received decoration using national motifs: domes, pylons, ornamental grilles and stained-glass windows, decor,

and stylized stalactites which were “replicas” of regional construction techniques.

The creative achievements of architects from post-Soviet Kazakhstan stemmed from the Soviet experience but gained a new momentum when they started to search for a regional architectural identity. Kazakh architects look for the origins of the intangible culture and interpret them in modern shapes. We believe that the transformation of Kazakhstan's architecture in the 21st century through understanding the regional identity can provide a harmonious symbiosis of traditional values and new technologies.

The combination of progressive construction technologies with the formation of avant-garde architecture of dominant and cultural significance at the regional level is a characteristic of modern architecture in Kazakhstan. The artistic look and architectural and planning solutions for new buildings are created with due regard for the natural and climatic, historical, cultural and social context, using new construction technologies and referring to the world experience of construction. This approach contributes to building an architectural environment which is mentally “native and friendly” for the local population, as well as modern, easy to understand and attractive for foreign tourists.


CONCLUSIONS


Thus, the analysis of Soviet and post-Soviet buildings in Kazakhstan reveals a picture of a gradual change in the creative paradigm from the romanticism of the 1970s to the monumentalism of the 1980s and then the avant-garde of the 2000s; it takes us from the Soviet international architecture to the post-Soviet understanding of regional identity.

The study performed has shown that the degree of transformation of the architecture in modern Kazakhstan is influenced by the following factors:

- the high-quality basic level of architecture of public buildings and structures as a legacy of the Soviet era, which reflected the local artistic and imagery specifics in accordance with the historical period;
- changes in social and economic conditions as a result of a change in the social and political realities, the collapse of the USSR, and Kazakhstan gaining independence in 1991;
- the governmental policy for establishing an international image of the country through building architectural brands: construction of a new capital city, holding international contests for designing the most significant buildings and engaging world-class architects, implementing advanced design and construction technologies;
- creative competition between Kazakhstani and foreign architectural experiences, rethinking the interpretation of looks and symbols of the traditional Kazakh architecture by foreigners; and
- adjusting form-making techniques according to world trends: extending compositional means towards the avant-gardism of the modern architecture of Kazakhstan.

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